

In re Patent Application of:

COHEN ET AL

Serial No. **09/885,683**

Filed: **JUNE 20, 2001**

IN THE CLAIMS

1. (Previously amended) A transceiver optical subassembly comprising:

a printed circuit board having a plurality of electrical connection points thereon;

a lead frame comprising a plurality of electrical leads connected to said connection points;

a solid-state laser connected to selected ones of said plurality of electrical leads;

a first photo-detector connected to selected ones of said plurality of electrical leads; and

a molded transparent cover member for enclosing said lead frame, said laser and said first photo-detector, said cover member defining an inclined planar surface and a partially cylindrical surface,

wherein said inclined planar surface is disposed in a path of emitted light from said laser and has a partially reflective/partially transmissive coating for separating the emitted light into a first beam passing through said cover member along a first optical path and a second beam of reflected light; and

wherein said partially cylindrical surface has a reflective coating for focusing and reflecting said reflected light onto a photo-sensitive surface of said first photo-detector providing an electronic representation of optical signals created by said laser;

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whereby electrical signals supplied to said laser through said electrical leads control the lasing of said laser.

2. (Previously Amended) The transceiver optical subassembly of claim 1 further comprising a second photo-detector disposed adjacent said inclined planar surface with a second unobstructed optical path parallel to said first optical path.

3. (Previously amended) The transceiver optical subassembly of claim 2, further comprising a pair of lenses disposed in and aligned with said first and second optical paths, respectively.

4. (Previously amended) The transceiver optical subassembly of claim 3, further comprising a transparent glass member disposed intermediate said inclined planar surface and said lenses, said transparent glass member substantially perpendicular to a central ray of said light exiting said inclined planar surface.

5. (original) The transceiver optical subassembly of claim 3 further comprising a cover enclosing a transparent member having a pair of parallel surfaces, said parallel surfaces perpendicular to a central ray of said light exiting said inclined surface.

6. (Previously amended) The transceiver optical subassembly of claim 4, further comprising a subassembly housing disposed over and enclosing said laser, said photo-detectors, said

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inclined planar surface, said cylindrical surface, and said glass member.

7. (Previously amended) The transceiver optical subassembly of claim 6, wherein said subassembly housing incorporates said pair of lenses in a fixed position relative to said laser and said second photo-detector.

8. (original) The transceiver optical subassembly of claim 6 further comprising at least one alignment member compatibly positioned to engage a mating plug, whereby said lenses may be aligned with optical elements of said plug.

9. (Previously amended) The transceiver optical subassembly of claim 8, wherein said at least one alignment member comprises a pair of pins disposed within and extending from said subassembly housing.

10. (original) The transceiver optical subassembly of claim 9 wherein said transceiver optical subassembly is assembled and sealed into a unitary structure.

11. (Previously amended) The transceiver optical subassembly of claim 5, further comprises transparent fluid having an index of refraction substantially equal to said indexes of refraction of materials of which said inclined planar surface and said transparent member are fabricated, said transparent fluid disposed intermediate said inclined planar surface and said transparent member.

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12. (Currently Cancelled)

13. (Previously Cancelled)

14. (Currently Cancelled)

15. (Currently Cancelled)

16. (Currently Cancelled)

17. (Currently Cancelled)

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19. (Currently Cancelled)